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## THE CALIFORNIA PAROSELAS

S. B. PARISH

(WITH FIVE FIGURES)

This paper is based on a study of the ample collections in the herbarium of the University of California, and of the material in the private herbaria of Dr. A. DAVIDSON and of the writer. While the numerous extralimital material in these collections has been carefully studied, the citation of specimens is confined, for the most part, to those collected within the boundaries of the state. Dr. HALL not only placed the collections of the University at the writer's disposal, but allowed him the use of a preliminary study which he had prepared, and most generously aided him in other ways. For the drawings, from which the figures have been reproduced, the writer is under obligations to the skillful pen of Mrs. CHARLOTTE M. WILDER.

### The generic name

The genus *Dalea* was founded by LINNAEUS in 1737, in his *Hortus Cliffortianus*, but in the *Species Plantarum* of 1753 he reduced it to *Psoralea*. The latter year being now accepted as the initial date for phanerogamic nomenclature, we are debarred from going back to LINNAEUS' earlier use of the name. It was revived by JUSSIEU in 1789, and according to present rules that must be taken as the authoritative date for the name, and it is with this citation that it is maintained in the new GRAY'S *Manual*.<sup>1</sup> Unfortunately, in the interval it had been used for two other genera. In 1756 P. BROWN applied it to what is now universally regarded as *Eupatorium*, so that, as a synonym, his use may be disregarded. But GAERTNER, in 1788, gave it to what ENGLER and PRANTL and the *Kew Index* now call *Microdon* Choisy (1823). This scrophulariaceous genus, therefore, has the prior title by a single year, and the leguminous genus must take the later name *Parosela* Cav. (1802).

<sup>1</sup> In the *Natürlichen Pflanzenfamilien*, *Dalea* Linn. is retained.

This needless and confusing change should have been provided against in the list of *nomina conservanda*, and it is to be hoped that the oversight may be remedied in a future revision.

### Distribution

Mexico is the center of distribution of the genus, fully 120 species (119, CONZATTI) having been described from the temperate regions of that republic. Thence it extends along the Andes to Chile, where it has its southernmost representative in *Dalea multifoliata*, at 30° south latitude. Crossing the United States' boundary, it is well developed in the Lower Sonoran life-area; 17 species are found in Texas (COULTER), 19 in New Mexico (HAMMOND), and 33 in Arizona (THORNBURGH). The most northern species is *Parosela alopecuroides*, which reaches southeastern North Dakota, at latitude 30° N., and the same species extends east to Tennessee (GATTINGER). Besides the continental species, two outlying ones are found on the Galapagos Islands. In California it is a characteristic genus of the deserts, a single species passing into an arid border of the cismontane region.

### Parosela

PAROSELA Cav. Descr. 185. 1802.—*Dalea* Juss., Gen. 355. 1789; *Asagraea* Baillon, *Adansonia* 9:232. 1870.—Annual or perennial herbs, shrubs, or trees, more or less glandular-dotted. Leaves odd-pinnate, rarely simple, with minute subulate stipules. Flowers in spikes or simple racemes, rarely scattered or solitary; bracts caducous, in ours subulate and inconspicuous; calyx 5-toothed; petals all with claws, that of the usually cordate banner inserted at the bottom of the calyx, and those of the wings and keel adnate below the middle of the cleft staminal sheath; stamens 10, rarely 9, monadelphous; anthers uniform; ovules 2, rarely 4-6; pod membranaceous or chartaceous, indehiscent, 1-seeded.

#### ARTIFICIAL KEY TO THE CALIFORNIAN SPECIES

Perennial herbs.

Calyx long-villous, its teeth filiform. . . . . 1. *P. mollis*.

Calyx silky-canescens, its teeth ovate-acute. . . . . 2. *P. Parryi*.

## Woody shrubs.

Flowers in condensed headlike spikes.

Stems conspicuously guttate-glandular;  
leaflets 1-5 mm. long.....3. *P. polyadenia*.Stems sparsely prickle-glandular; leaflets  
1-2 cm. long.....4. *P. Emoryi*.

Flowers in loose spikes or racemes.

Leaves pinnate, or a few simple.

Leaves and twigs hoary-tomentose.....5. *P. neglecta*.

Leaves and twigs appressed silky-pubescent.

Leaflets distinct.....6. *P. Johnsonii*.Leaflets decurrent or confluent.....7. *P. californica*.Leaves mostly simple, but a few 3-pinnate...7a. *P. californica simplifolia*.Leaves all simple, glabrate.....8. *P. Schottii*.Spinose tree, hoary-pubescent, nearly leafless...9. *P. spinosa*.

## SYNOPSIS OF THE SPECIES

\*Ovules 2; pod included

†Flowers spicate; herbs

1. *PAROSELA MOLLIS* (Benth.) Heller, Cat. N. Am. Pl. ed. 2. 6. 1900.—*Dalea mollis* Benth. Pl. Hartw. 306. 1848.—Herbaceous from a perpendicular root, the spreading stems 5-15 cm. long, dotted with small, flat, brown glands, soft-villous, as are the leaves: leaflets 9-13, oblong, cuneate-oblong, obovate, or obcordate, usually retuse, 3-8 mm. long, dotted with a row of small marginal glands: flowers numerous in oblong spikes, 1-6 cm. long; calyx 6 mm. long, its teeth filiform from a triangular base, equaling or exceeding the glandular-dotted tube; corolla rose-tinted, not exceeding the calyx teeth; banner 2 mm., wings and keel 3 mm. long, the latter mostly with a small gland at base: pod obovate, hirsute, and glandless, 3 mm. long: seed brown, reniform, 2 mm. long.—Fig. 1.

Probably a short-lived perennial, sometimes flowering the first year. The flowers are on very short pedicels, bracteolate at base by a pair of swollen pointed glands, which persist on the rachis after the fall of the fruiting calyces.

TYPE.—“*In vicinibus Monterey*”; certainly an error. According to WATSON, in the *Botany of California*, it was first collected by COULTER, probably in southern Arizona.

DISTRIBUTION.—A common species in sandy and gravelly soils throughout the Lower Sonoran of the Colorado and Mojave deserts; thence northeast to southern Nevada (GOODING 2237), southeast through Arizona (THORNBUR)

and New Mexico to Coahuila, Mexico (PURPUS 115), south to Guaymas (PALMER) and Lower California (BRANDEGEE).

SPECIMENS EXAMINED.—*Mojave Desert*: Inyo Mountains, S. W. AUSTIN 441; Panamint Cañon, May 14, 1906, HALL 6999; Bagdad, May 2, 1892, BRANDEGEE; Camp Cady, May 1882, PARISH 83; Sheephole Mountains, May 1895, HALL 6097. *Colorado Desert*: Palm Springs, April 10, 1880, PARISH 88, and April 10, 1893, DAVIDSON; Coachella, April 1905, GREATA 415, and HALL 5792; Mecca, April 1904, Mrs. M. McKIBBEN; McCoy Wash, April 1905, HALL 5932; Borregos Spring, April 28, 1894, BRANDEGEE; Hodges Mountain, April 1905, HALL 5975; Salton, April 12, 1892, DAVY 8049; Chuckawalla Bench, December 3, 1904, E. E. SCHELLENGER 99; Palo Verde, April 1905, HALL 5956; Calexico, March 29, 1902, DAVY 8005; Dixyland, October 18, 1912, PARISH 8312.

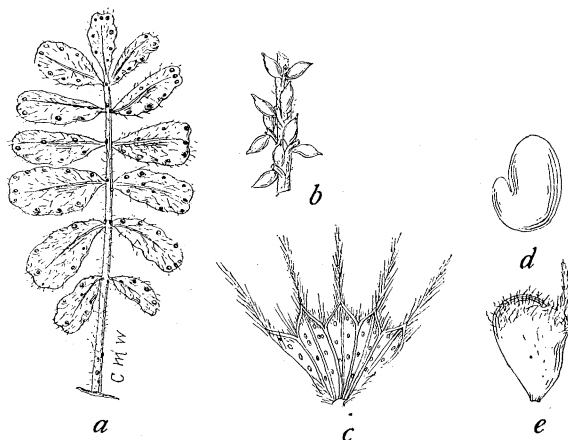


FIG. 1.—*Parosela mollis*: a, leaf; b, part of rachis, showing the glandular bracteoles; c, calyx, from the inside, to show the glands, which are concealed on the exterior by the dense hairs; d, seed; e, mature pod; a, c, d, e,  $\times 3$ .

2. PAROSELA PARRYI (T. & G.) Heller, Cat. N. Am. Pl. ed. 2. 6. 1900.—*Dalea Parryi* T. & G., Proc. Am. Acad. 7:397. 1868.—Perennial, the slender woody stems ascending, 1–6 dm. tall, finely and closely puberulent, or glabrate, dotted with small flat, dark glands: leaflets 3–21, oblong to obovate, obtuse or retuse, 1–3 mm. long, sparsely puberulent or glabrate, obscurely glandular-dotted or glandless: flowers numerous in pedunculate spikes 5–8 cm. long; calyx 3 mm. long, nervose, silky-canescens, obscuring the rows of small glands in the intervals, or glabrate; upper teeth triangular

or ovate-acute, the lowest narrower and longer, about half the length of the tube; corolla minutely glandular-dotted, twice exceeding the calyx; banner broadly orbicular, 1.5–2 mm. high and as

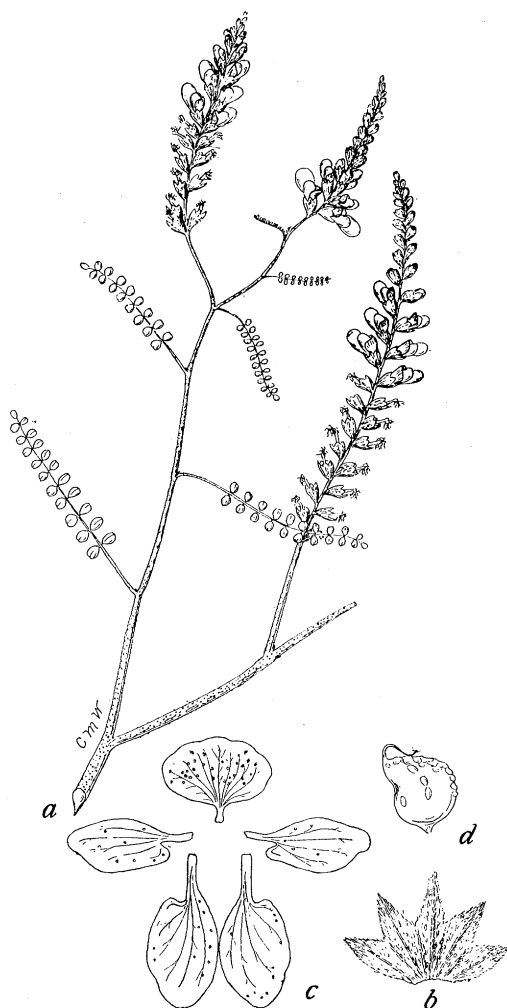


FIG. 2.—*Parosela Parryi*: a, branch, natural size; b, calyx; c, petals; d, pod; all  $\times 2.5$ .

wide or wider; wings 2 mm. and keel 4 mm. long, the lower half of the banner and the upper half of the keel blue, the remainder white: pod gibbous, glandular, 2 mm. long: seed reniform.—Fig. 2.

TYPE.—“Gravelly hills near Ft. Mohave, Dr. J. G. COOPER, and lower down on the Colorado, near the mouth of the Williams River, Dr. C. C. PARRY.”

DISTRIBUTION.—Lower Sonoran of the Colorado Desert, thence to Arizona (PURPUS 8507) and adjacent Mexico (PALMER) and Lower California (BRANDEGEE).

SPECIMENS EXAMINED.—Thermal, May 1903, DAVIDSON; Mammoth Tank, March 17, 1882, PARISH 1180; Cañon Springs Wash, February 25, 1904, SCHELLENGER 63; Cane Spring, April 1905, HALL 5846; Chuckawalla Bench, December 1906, SCHELLENGER 95; Palo Verde, April 1905, HALL 5975; Virginia Dale, May 1905, HALL 6041.

**Parosela Orcuttii**, comb. nov.—*Dalea Orcuttii* Wats., Proc. Am. Acad. 20:359. 1885, a species of adjacent Lower California, may be looked for near the boundary. It resembles *P. Parryi*, but the stems are not glandular-dotted, and the corolla is but little longer than the calyx teeth.

†† *Flowers in condensed spikes which are sessile at the ends of branchlets, the rachises deciduous, leaving the branchlets as a subspinose armament; calyx teeth similar, or nearly so. Shrubs, even the old wood glandular*

3. PAROSELA POLYADENIA (Torr.) Heller, Cat. N. Am. Pl. ed. 2. 6. 1900.—*Dalea polyadenia* Torr. ex Wats., Geol. Expl. 40th Par. 5:64. pl. 9. 1871.—Shrub 5–10 dm. tall, sparsely spinose, the short and stout divaricate branches canescent with a dense pannose tomentum, and copiously dotted with large yellow or red guttate glands: leaves on short petioles, 1–2 cm. long; leaflets 5–11, ovate, 1–5 mm. long, tomentose and sparsely glandular; flowers numerous; spikes globose or oblong; calyx villous and glandular-dotted, 3.5–4 mm. long; teeth subulate from a broad base, nearly as long as the tube; petals rose-pink or purple, each usually with a small gland at the apex, rarely somewhat bearded, 3.5 mm. long, little exceeding the calyx teeth: pod 3–5 mm. long, pubescent above.

TYPE.—“Borders of the Truckee Desert, Nevada.”

DISTRIBUTION.—Inyo County, thence into Nevada (Wadsworth, KENNEDY, Candelaria, SHOCKLEY 275).

SPECIMENS EXAMINED.—Owens Valley, PURPUS 1960.

PAROSELA POLYADENIA (Torr.) var. **subnuda**, comb. nov.—*Dalea polyadenia* Torr. var. *subnuda* Wats., Bot. Cal. 2:441. 1880.—Glabrous or nearly so; calyx glabrous and glandular-dotted, the teeth villous-ciliate.

TYPE.—“Owens Valley (Dr. W. MATTHEWS); Southern Utah (W. JOHNSON).”

SPECIMENS EXAMINED.—Mono County, July 1888, Mrs. J. H. HARCOURT; Owens Valley, S. W. AUSTIN 171; Owenyo, June 1911, DAVIDSON.

4. *PAROSELA EMORYI* (Gray) Heller, Cat. N. Am. Pl., ed. 2. 6. 1900.—*Dalea Emoryi* Gray, Mem. Am. Acad. II. 5:315. 1855; Torr. Pac. R.R. Rep. 5:360. *pl.* 2.—Shrub 1–2 m. high, destitute of true spines, the numerous slender intricate branches hoary pubescent and sprinkled with small brown or red prickle-shaped glands: leaves 1–9 cm. long, pubescent and sparsely glandular; leaflets 3–13, the terminal one usually narrower and longer than the lateral, rarely a few of the uppermost simple: flowers 10–20; spike globose, 1–2 cm. in diameter; calyx silky villous, 6 mm. long, colored orange by the abundant minute subulate glands; teeth linear, as long as the tube; corolla bright purple, little exceeding the calyx teeth; petals nearly equal, about 4 mm. long; pod 3 mm. long, dotted with red glands.

TYPE.—“On the desert tablelands of the Gila, 1852.”

DISTRIBUTION.—Lower Sonoran of the Colorado Desert, thence into adjacent Arizona, and throughout Lower California to La Paz (BRANDEGEE).

SPECIMENS EXAMINED.—Palm Springs, April 1882, April 18, 1896, April 23, 1907, PARISH 93, 412, 6106; April 10, 1893, DAVIDSON; 1902, F. GILMAN; May 1894, L. D. COPELAND; April 20, 1906, GRANT; May 22, 1911, O. F. SELLIG; July 25–August 14, SCHELLENGER; Indio, May 8, 1903, JONES; McCoy Wash, April 1905, HALL 5946; Borregos Spring, April 19, 1906, JONES; abundant toward the foothills, Mecca, June 28, 1912, PARISH 8133; Old Beach, near Holtville, both above and below sea-level, June 30, 1912, PARISH 8088.

\*\* *Ovules* 2, *collateral*; *pod* glandular-dotted, *exserted*; *the dead rachises persisting as a spinelike armament*. *Shrubs, the mature wood glabrous and glandless*

† *Flowers sessile, or nearly so, in open spikes; calyx teeth dissimilar, the lower one narrower and mostly longer than the upper pair; leaves pinnate, or a few of the uppermost simple*

5. *Parosela neglecta*, n. sp.—*Dalea arborescens* Parish, Zoe 4:341. 1894, non TORREY.—Frutex subspinescens, 1–1.5 m. altus, caulibus junioribus tomentosis, cum glandulis parvis subulatis instructis; foliolis 3–7 oblongis vel obovatis sub tomento canescente obscure glandulosis; spicis 7–15-floris; calyce villosa minute glandulosoque, 8–9 mm. longo, tubo valde nervoso dentes aequante,



dentibus superioribus duobus acuminatis vel lanceolatis; corolla caerulea, vexillo oblongo-cordato, 8 mm. longo, 4 mm. lato; alis carinaque 6-7 mm. longis; ovario glanduloso-punctato.—Fig. 3.



FIG. 3.—*Parosela neglecta*: *a*, flowering branch, natural size; *b*, *c*, *d*, leaves; *e*, calyx from within; *f*, calyx exterior; *g*, petals; all  $\times 2.5$ .

In recent years this plant has been taken for *Dalea arborescens* Torr., and in some respects it agrees with the character of that species given in *Plantae Thurberianae*, but is excluded by the phrases "*floribus in spicam densam brevem*

*congestis* . . . spikes ovate or oblong," with which it does not in the least accord.

DISTRIBUTION.—So far as known, local in the neighborhood of Barstow, in the Mojave Desert.

Fishpond Station (Daggett), May 1882, PARISH 644, type; Barstow, May 14, 1897, F. W. HUBBY 141; May 3, 1906, HALL and CHANDLER 6831; May 18, 1905, HALL 6160.

6. *PAROSELA JOHNSONII* Vail, Bull. Torr. Bot. Club **24**:17. 1897.—*Dalea Johnsonii* Wats., Geol. Expl. 40th Par. **5**:64, 1871.—Shrub 1–1.5 m. high, the slender branches scantily appressed-pubescent or glabrate, glandless or nearly so: leaflets 5–7, linear to narrowly oblong, thinly pubescent and obscurely glandular, narrowed to the rachis: flowers short-pedicellate; calyx sparsely pubescent and nearly glandless, obscurely nerved, 5–5.5 mm. long, the teeth less than half the length of the tube, the upper pair triangular-acute; corolla deep purple; petals about 6 mm. long.

TYPE.—"Near St. George, on the Virgin River, Utah."

DISTRIBUTION.—From southern Utah to the borders of Arizona (Grand Cañon, WILSON) and the eastern border of the Colorado Desert.

SPECIMENS EXAMINED.—Eastern edge of the Colorado Desert, SCHELLENGER; Kane Spring, Ord Mountain, May 1, 1906, HALL and CHANDLER 6826; Cottonwood Mountains, May 11, 1905, HALL 6024.

*PAROSELA JOHNSONII* (Wats.) Vail var. *Saundersii*, comb. nov.—*P. Saundersii* Abrams, Bull. N.Y. Bot. Gard. **6**:396. 1910; *P. Wheeleri* Heller, Muhlenb. **2**:216. 1906; *Dalea Saundersii* Parish, Bull. S. Cal. Acad. **2**:83. *pl.* 2. 1903.—Leaflets 5–9, lanceolate, sessile, or on short petiolules, glabrate; stems sparsely prickleglandular.

Victorville, May 12–14, 1903, C. F. SAUNDERS, and May 1905, HALL 6197; Big Pine, Inyo County, May 29, 1906, HALL and CHANDLER 7222; Owens Valley, May 11, 1906, HELLER 8236.

*PAROSELA JOHNSONII* (Wats.) Vail var. *pubescens*, n. var.—Calycis dentibus majoribus tenuioribusque; legumine pubescente simul glanduloso.

Lee's Ferry, Arizona, June 13, 1890, JONES 3076.

*PAROSELA JOHNSONII* (Wats.) Vail var. *minutifolia*, n. var.—Foliolis 5–7, oblongis, 2–4 mm. longis.

Mouth Panamint Cañon, May 11, 1906, HALL and CHANDLER 7002; Providence Mountains, May 24, 1905, BRANDEGEE.

7. *PAROSELA CALIFORNICA* Vail, Bull. Torr. Bot. Club **24**:17. 1897.—*Dalea californica* Wats., Proc. Am. Acad. **11**:132. 1876.—Shrub 1–2 m. high, hoary with a fine upwardly appressed pubescence, and sparsely beset with prickle-shaped glands; leaves 2–3 cm. long; leaflets 3–7, the terminal often longer than the others, rarely a few simple, the edges thickened, hoary-pubescent, concealing the small glands, decurrent on the rachis or confluent; calyx 5 mm. long, nerved, minutely glandular-dotted, thinly pubescent, in fruit glabrate; teeth shorter than the tube, the upper pair ovate-acute; corolla bright purple; petals 8–8.5 mm. long; pod 8 mm. long; seed castaneous, ovate.—Fig. 4.

Extreme forms, such as Jones's Palm Spring specimen (Hb. U. Cal. 12852), having leaves 3-foliolate to simple, connect this species too closely with *Dalea Fremontii* Wats., and it is not impossible that it must be reduced to a variety thereof.

TYPE.—“Known as yet only from scanty specimens recently collected by Dr. PARRY in the San Bernardino Mountains, California.” According to statements made to the writer by Dr. PARRY, the type was collected east of Banning, on the borders of the Colorado Desert.

DISTRIBUTION.—Western borders of the Colorado Desert, at 150–600 m. altitude, and in the eastern part of the San Jacinto Valley, in the cismontane area.

SPECIMENS EXAMINED.—Near Banning, 1882, PARISH 644, and May 1892, DAVIDSON; Palm Springs, April 1896, PARISH 4111, May 10, 1903, JONES, 1904, R. J. SMITH 308, May 21, 1911, O. F. SELIG, and May 1902, HALL 1832; Cottonwood Mountains, May 1905, HALL 6025; between Palm Springs and Whitewater, July 25–August 14, E. E. SCHELLENGER, intermediate between the species and the following variety.

*PAROSELA CALIFORNICA* (Wats.) Vail var. *simplifolia*, n. var.—Glaberrima, ramis eglandulosis: foliis simplicis, rariusve pinnato-3-foliolatis; calycis majoribus.

Western part of the Colorado Desert, 1904, M. F. GILMAN 51 (in Herb. Univ. Cal.).

†† *Flowers pedicellate, in simple racemes; leaves all simple*

8. *PAROSELA SCHOTTII* (Torr.) Heller, Cat. N. Am. Pl. ed. 2. 6. 1900.—*Dalea Schottii* Torr. Bot. Mex. Bound. 53. 1859.—Compact spinose shrub 1–3 m. high, with numerous slender, green and glabrate, glandless branches: leaves linear, 3–25 mm. long, puberulent, but soon glabrate, bearing near the thickened margins a

few small, dark, impressed glands: racemes 4–8 cm. long, 6–20-flowered; pedicels 1–1.5 mm. long; calyx 5 mm. long, sparsely hirsute, glabrate in fruit, nerved, and with a row of small red glands,

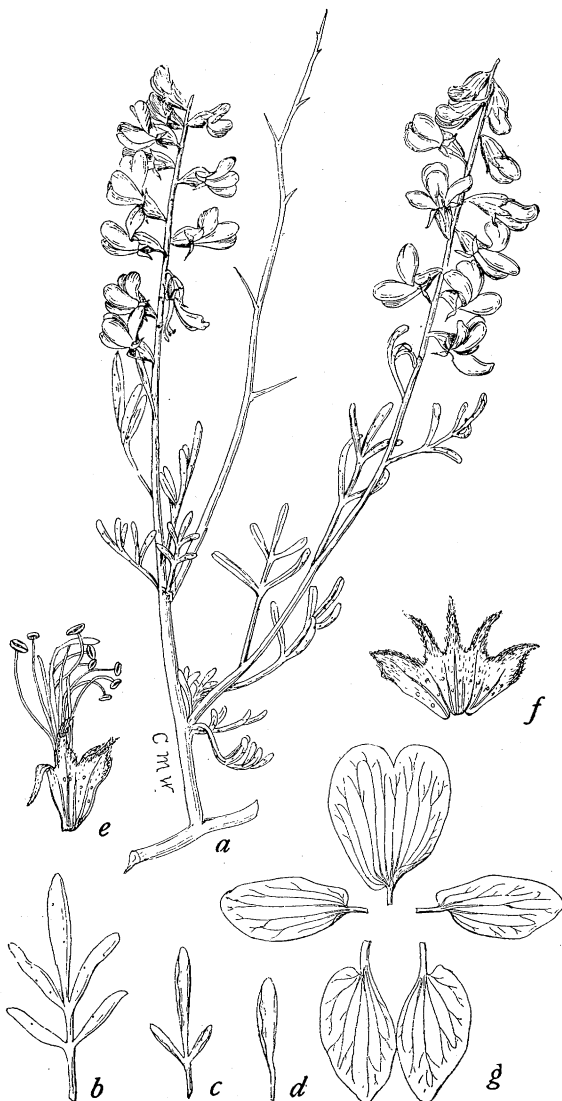


FIG. 4.—*Parosela californica*: a, flowering branch, natural size; b, c, d, leaves; e, calyx and stamens; f, calyx laid open; g, petals; all  $\times 2.5$ .

very obscure in flower, but distinct in fruit; teeth ciliate, the upper pair a little wider and more obtuse; corolla deep purple; banner 8 mm., wings 10 mm. and keel 8-10 mm. long: pod 1 cm. long, its glands, red: seed castaneous, obovate, 7-8 mm. long.—Fig. 5.



FIG. 5.—*Parosela Schottii*: a, flowering branch, natural size; b, calyx; c, petals; a, pod and fruiting calyx; all  $\times 3$ .

Some of the lowest flowers are often in the axils of leaves. The fragrance of the abundant bloom is sometimes diffused for miles on the quiet desert air.

TYPE.—“Diluvial banks of the Colorado, February, SCHOTT.”

DISTRIBUTION.—An abundant species of the Colorado Desert, extending into adjacent Arizona and into Lower California (BRANDEGEE).

SPECIMENS EXAMINED.—Palm Springs, April 10, 1880, April 1896, PARISH 83, 4113, April 1904, L. D. COPELAND 4, October 15, 1904, SCHELLENGER 3, 1902, M. F. GILMAN 21, April 1905, HALL 5738, and May 21, 1911, O. F. SELIG; Coachella, April 1905, GREATA and HALL 5781; Chuckawalla Mountains, April 1905, HALL 5973; Indio, April 1905, HALL 5990.

PAROSELA SCHOTTII (Torr.) Heller var. **puberula**, n. var.—Rami juvenes foliaque canescente puberuli; calyce parum vel dense pubescente.

Colorado Desert, April 1905, BRANDEGEE; Borregos Spring, April 29, 1904, BRANDEGEE; Cajon de Santa Maria, Lower California, May 10, 1889, BRANDEGEE.

\*\*\* *Ovules 4 (-6); calyx teeth similar, pod glandular-dotted, exserted; flowers spicately scattered on stout spine-tipped branchlets (Asagraea Baillon, Adansonia 9:232. 1870)*

9. PAROSELA SPINOSA Heller, Cat. N. Am. Pl. ed. 2. 7. 1900.—*Dalea spinosa* Gray, Mem. Am. Acad. 5:315. 1855; Torrey, Pac. R.R. Rep. 7<sup>3</sup>:9. pl. 3. 1856; *Asagraea spinosa* Baillon, Adansonia 9:233. 1870.—Intricately branched tree 4–7 m. high, the numerous spinescent branchlets hoary with a fine close pubescence, and sparsely dotted with small flat glands; leaves very few and promptly deciduous, narrowly oblong, the margins thickened, 5 mm. long; flowers on pedicels 1 mm. long; calyx 5 mm. long, strongly nerved, encircled above with a ring of large, reddish, guttate glands; teeth 2 mm. long, ovate; corolla dark blue; banner 6 mm. long and as broad; keel and wings 8 mm. long; anthers with an oblong red gland at base.

The flowers do not extend to the sharp horny spine of the branchlets, not all of which are floriferous, and which cannot be regarded as the peduncles of a true spicate inflorescence. *Parosela Kingii* (Wats.) has solitary flowers borne on like spinescent branchlets, and *Holocantha Emoryi* Gray has an analogous inflorescence.

TYPE.—“Arroyos on the Gila; and on the California Desert west of the Colorado.”

DISTRIBUTION.—At low altitudes in the Colorado Desert, thence to adjacent Arizona, Sonora, and Lower California.

SPECIMENS EXAMINED.—Colorado Desert, 1894, A. W. ANTHONY; White-water, May 1904, R. G. SMITH; Palm Springs, June 1895, DAVIDSON, in full flower, and April 1907, PARISH; Chuckawalla Bench, June 25, August 14, 1903, SCHELLENGER 2, 3; Indio, June 1880, PARISH 22; toward the foothills near Mecca, and in Red Cañon, abundant and in full bloom, June 28, 1912, PARISH 8108.

#### SPECIES INCERTA

DALEA ARBORESCENS Torr. ex Gray, Mem. Am. Acad. II. 5:316. 1885.—“Much branched, almost glandless, subspinescent; the adult branches glabrate, the younger, together with the leaves and the calyces, canescent-tomentose: leaflets 5, approximate, obovate: flowers congested in a short dense spike; bracts small, subulate; the acuminate teeth of the calyx as long as the campanulate tube, the two upper oblong-triangular, the others narrowly lanceolate: petals (purple?) about equal.

“‘A small tree!’ Glands scarcely any, a few minute tubercular ones occasionally found on the branchlets when denuded of their dense woolly covering. Leaves petioled, the leaflets only 2–3 lines long. Flowers 5–6 lines long; the calyx large in proportion, the tube obscurely striate. Vexillum obcordate.”

The above is the original character, the first paragraph translated. The type is said to be from the “Mountains of San Fernando, a southern branch of the Sierra Nevada, California; April, FREMONT.” This region is now well known, but no species of *Parosela* has been collected there; certainly it could hardly have escaped notice if a tree. The type specimen is a mere fragment, from which little can be learned. The condensed inflorescence indicates that it should be placed near *Parosela polyadenia* and *P. Emoryi*, where it was located by WATSON in the *Botany of California*.

SAN BERNARDINO, CAL.